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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,173

03/27/2006

Manfred Herbst

2002p17478WOUS

6185

7590 11/15/2007
Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

WHITE, DWAYNE J

ART UNIT	PAPER NUMBER
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3745

MAIL DATE	DELIVERY MODE
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11/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/532,173

Applicant(s)

HERBST, MANFRED

Examiner

Dwayne J. White

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/21/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-17 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hickey (4,974,633) in view of Olsen (WO 02/064422A1). Hickey discloses a wind power unit comprising: a mast; a nacelle; a rotor associated with the nacelle; and a plurality of rotor blades 22/26 having a plurality of recesses to improve flow arranged on the rotor blades approximately in the region between the transition point between laminar and turbulent flow and the final edge of the rotor blade and the shape and configuration of the recesses are designed such that as the air sweeps past the recess, an eddy forms in the recess that assists the passage of the air and accelerates the air volume. Hickey discloses hemispherical recesses that are arranged "regularly". In regards to claims 19 and 20, it is clearly an obvious matter of engineering design to tailor the structure and control software for the wind turbine unit to a stall speed as modified by the recesses since the modifications would change the operation of the wind turbine unit. Hickey does not disclose having recesses on the mast, gondola or rotor, the recesses being arranged in offset rows, a component surface not being susceptible to dirt and ice or the recesses being on a support material.

Olsen teaches a plurality of offset rows of teardrop shaped recesses (Page 7, lines 13-15) that are applied to a surface of a component interacting with a fluid medium. The recesses

reduce drag similar to how Hickey's recesses reduce drag and also reduce susceptibility of the component to dirt and ice (Page 5, lines 6-9). The recesses are configured on a flat support material that is fixed to the component (Page 6, lines 30 to Page 7, line 6). Since both Hickey and Olsen disclose drag reducing recesses to be applied to aerodynamic surfaces, and it is already well known in the art that such applications are interchangeable based on the needs of the application, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the recess of Hickey, with the teaches of Olsen as stated above, for the purpose of reducing drag forces on the wind turbine unit.

Claims 11, 17 and 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hickey in view of Wobben (6,729,846). Hickey discloses Hickey discloses a wind power unit comprising: a mast; a nacelle; a rotor associated with the nacelle; and a plurality of rotor blades 22/26 having a plurality of recesses to improve flow arranged on the rotor blades approximately in the region between the transition point between laminar and turbulent flow and the final edge of the rotor blade and the shape and configuration of the recesses are designed such that as the air sweeps past the recess, an eddy forms in the recess that assists the passage of the air and accelerates the air volume Hickey does not disclose except for the recesses being on a flat film material fixed on or to the wind power unit.

Wobben teaches a wind power unit wherein recesses are configured on a film support material that is fixed to the wind turbine component (Column, 3, lines 56-65). Since both Hickey and Wobben disclose drag reducing recesses to be applied to aerodynamic surfaces, and it is already well known in the art that such applications are interchangeable based on the needs of the application, it would have been obvious at the time the invention was made to one of

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ordinary skill in the art to modify the recess of Hickey, with the teaches of Wobben as stated above, for the purpose of reducing drag forces on the wind turbine unit.

CONCLUSION

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bearman et al (6,908,063) discloses applying a drag reducing surface modification to the mast of a wind turbine unit.

Marentic et al. (5,133,516) discloses applying recesses to an article to reduce drag.

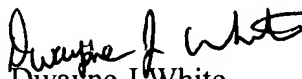
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne J. White whose telephone number is (571) 272-4825. The examiner can normally be reached on 7:00 am to 3:30 pm M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Dwayne J White
Patent Examiner
Art Unit 3745

DJW


EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
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11/13/07